

**TECHNICAL REVIEW DOCUMENT  
for  
MODIFICATION TO OPERATING PERMIT 96OPPB133**

Public Service Company of Colorado – Comanche Station  
Pueblo County  
Source ID 1010003

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**I. Purpose:**

This document establishes the decisions made regarding the requested modification to the Operating Permit for Public Service Company of Colorado's Comanche Station. This document provides information describing the type of modification and the changes made to the permit as requested by the source and the changes made due to the Division's analysis. This document is designed for reference during review of the proposed permit by EPA and for future reference by the Division to aid in any additional permit modifications at this facility. The conclusions made in this report are based on the information provided in the request for modification submitted to the Division on November 20, 2013, e-mail correspondence and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

**II. Description of Permit Modification Request/Modification Type**

The Operating Permit for Comanche Station was issued on June 1, 2002 and was renewed on June 1, 2012. Public Service Company of Colorado (PSCo) submitted a request to modify the permit on November 20, 2013 to update the compliance assurance monitoring (CAM) 24-hour opacity baseline for Units 1 and 2. Performance testing was conducted to demonstrate compliance with the Regional Haze particulate matter emission limit, which resulted in a change to the CAM 24-hour opacity baselines.

The June 1, 2012 renewal permit indicates that a modification application to change the CAM 24-hour baseline opacity would be processed a minor modification. Colorado

Regulation No. 3, Part C, Section X.A identifies those modifications that can be processed under the minor permit modification procedures. Changes to the CAM indicator level do not violate any applicable requirements, do not involve significant changes to existing monitoring, reporting or record keeping requirements, does not require or change a case-by-case emissions limitation, is based on underlying applicable requirements and is not otherwise required to be processed as a significant modification (e.g., does not increase emissions) therefore, changes to the CAM indicator range can be processed as a minor modification. .

### **III. Modeling**

No physical changes to any emissions units were made with this modification, nor does this modification result in an increase in emissions, therefore, modeling is not required for this modification.

### **IV. Discussion of Modifications Made**

#### **Source Requested Modifications**

The Division addressed the source's requested modifications as follows:

#### **Section II.1- Units 1 and 2**

- Revised the PM and PM<sub>10</sub> emission factors in the summary table under Conditions 1.1 and 1.2 to reflect the results of the latest performance tests.

#### **Section II.13 – CAM Requirements**

- Revised the baseline opacity values in Condition 13.1..

#### **Appendix G – Units 1, 2 & 3 PM CAM Plan**

- Removed the notation of “future requirement” from the 0.03 lb/MMBtu PM limits for Units 1 and 2 in Section I.b.
- Included the new baseline opacities for Units 1 and 2 in the table in Section II (under indicator range).
- Added the results of the 2013 performance tests for Units 1 and 2 to the table in Section III and noted that the baseline opacities for Units 1 and 2 are based on the 2013 test.

#### **Other Modifications**

In addition to the requested modifications made by the source, the Division used this opportunity to include changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct

errors or omissions identified during inspections and/or discrepancies identified during review of this modification.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments on other permits, to the Comanche Station Operating Permit with the source's requested modifications. These changes are as follows:

### **Streamlining Regional Haze Requirements**

The Regional Haze (RH) Requirements are included in Section II.19 of the permit and include PM, NO<sub>x</sub> and SO<sub>2</sub> emission limitations for Units 1 and 2. These requirements were included in the permit as future requirements. Since the June 1, 2012 renewal permit was issued, Colorado's RH State Implementation Plan (SIP) was approved and published in the Federal Register on December 31, 2012, with an effective date of January 30, 2013.

As required by Colorado Regulation No. 3, Part F, Section IV.A.4 (Condition 1.19.2.2 of the June 1, 2012 Title V permit), PSCo submitted a compliance schedule, the schedule was published for a 30-day comment period and the Division made its final determination within 60 days after the close of the public comment period.

The compliance dates were determined to be August 22, 2013 for the NO<sub>x</sub> and SO<sub>2</sub> emission limitations and December 1, 2013 for the PM limitation. For the NO<sub>x</sub> and SO<sub>2</sub> RH limitations, PSCo was required to begin gathering data for the NO<sub>x</sub> and SO<sub>2</sub> emission limitations and compliance would be assessed after 30 and 365-days of emission data was gathered, for both the 30-day and annual NO<sub>x</sub> and SO<sub>2</sub> limitations. For the PM limitations, PSCo was required to conduct a performance test within 60 days of December 1, 2013, but no later than February 1, 2014.

PSCo conducted performance tests for the RH PM limits in October 2013. PSCo began gathering data on August 22, 2013 for the RH NO<sub>x</sub> and SO<sub>2</sub> limits and has accumulated 30 days of data to assess compliance with the 30-day limitations but has not yet accrued 365 days of data to assess compliance with the annual limitations.

The RH PM limit (0.03 lb/MMBtu) is more stringent than the Reg 1 PM limit (0.1 lb/MMBtu). The 30-day and annual NO<sub>x</sub> and SO<sub>2</sub> RH limits are numerically equivalent to the existing 30-day and annual NO<sub>x</sub> and SO<sub>2</sub> emission limitations, however, most of the existing limits excluded emissions generated during certain periods of time from the compliance assessment, hence the RH 30-day NO<sub>x</sub> and SO<sub>2</sub> limits and annual NO<sub>x</sub> limit are slightly more stringent than the existing 30-day NO<sub>x</sub> and SO<sub>2</sub> limits and annual NO<sub>x</sub> limit. Since the RH PM limit and 30-day NO<sub>x</sub> and SO<sub>2</sub> limits are more stringent than the existing PM and 30-day NO<sub>x</sub> and SO<sub>2</sub> limits, they will be streamlined out of the permit in favor of the more stringent RH limitations. Since PSCo has not yet accrued 365 days of data to assess compliance with the annual RH NO<sub>x</sub> limit it will not be streamlined from the permit at this time. For the existing annual SO<sub>2</sub> limit, all data was included in

assessing compliance with the limitation, therefore, it is virtually the same as the RH annual SO<sub>2</sub> limit. The Division is streamlining the RH annual SO<sub>2</sub> limit in favor of the existing annual SO<sub>2</sub> limit since they are equivalent.

In addition, the RH monitoring, recordkeeping and reporting requirements are equivalent to much of the monitoring, recordkeeping and reporting requirements that are already in the permit. Therefore, the majority of the RH monitoring, recordkeeping and reporting requirements have been streamlined in favor of the other requirements included in the permit.

The following changes will be made to the permit to address the streamlining of the Reg 1 PM limits, the existing NO<sub>x</sub> and SO<sub>2</sub> 30 day and RH annual SO<sub>2</sub> limitations, and the RH monitoring, recordkeeping and reporting requirements.

#### Section II.1 – Units 1 and 2

- The following changes were made to Conditions 1.1 to address the PM limits.
  - The RH PM limit was included in Condition 1.1.1.
  - The criteria for setting the baseline 24-hour opacity from Condition 1.19.3.2 was moved to Condition 1.1.4.
  - The requirement to follow the CAM requirements in Condition 1.19.3.3 was moved to Condition 1.1.5
  - Condition 1.1.6 was removed since the Reg 1 limit was streamlined in favor of the RH PM limit
- The following changes were made to Condition 1.3 to address the SO<sub>2</sub> limitations.
  - The RH 30 day SO<sub>2</sub> limits replace the existing 30-day SO<sub>2</sub> limits from the construction permits included in Condition 1.3.2.
  - The RH monitoring language for the 30-day and annual averages (Conditions 1.19.4.3 and 1.19.4.5) and the last paragraph in Condition 1.19.4.1 were included in Conditions 1.3.5.2 and 1.3.5.3.
  - Condition 1.3.5.4 (compliance with the construction permit limits when the RH limits take effect) was removed and the definition of operating day in Condition 1.19.4.4 was included in its place.
- The following changes were made to Condition 1.4 to address the NO<sub>x</sub> limitations.
  - The RH 30 day NO<sub>x</sub> limits replace the existing 30-day NO<sub>x</sub> limits from the construction permits included in Condition 1.4.2.
  - The annual RH annual NO<sub>x</sub> limit is included in Condition 1.4.3 and the conditions that follow were renumbered. The monitoring requirements are

now included in Condition 1.4.7 (previously the monitoring was in Condition 1.4.6)

- The RH monitoring language for the 30-day and annual averages (Conditions 1.19.4.3 and 1.19.4.5) and the last paragraph in Condition 1.19.4.1 were included in Conditions 1.4.7.2 and 1.4.7.3 (new language).
- The definition of operating day is referenced in Condition 1.4.7.5.
- Revisions were made to Conditions 1.4.7.4 (monitoring for existing annual limit) and 1.4.7.6 (compliance with existing annual limit when RH limit compliance demonstration is complete) to correct references.
- Removed the reference to Condition 1.19.1.1 from Condition 1.18, since the permit includes only one short term PM limit.
- Condition 1.19 was removed, since the requirements have been included in other parts of Sections II.1 or II.8 and/or streamlined in favor of equivalent or more stringent requirements.

#### Section II.7 – PM Periodic Monitoring

- Revised Condition 7.2 to include the performance test language included in Reg 3, Part F, Section VII.C (included in Section II, Condition 1.19.3.1 of the June 1, 2012 permit). In addition, clarified that this performance testing is with respect to Units 1 and 2.

#### Section II.8 – Continuous Emission Monitoring and Continuous Opacity Monitoring Systems

- The reporting requirements in Condition 8.4.1 (Reg 1, Section IV.G reporting requirements for Unit 1) were removed and Condition 8.4.2 was revised to indicate that it applies to all units. Under the RH recordkeeping and reporting requirements, Reg 3, Part F, Section VII.E, specifies that excess emission reports include the information in 60.7(c). The Reg 1, Section IV.G requirements, with respect to Unit 1, were streamlined (previously Reg 1, Section IV.G requirements were streamlined only with respect to Units 2 and 3).

#### Section II.13 – CAM Requirements

- Removed references to Condition 1.19.3.2 in Condition 13.1.2, since the permit only includes one method to establish the baseline opacity for Units 1 and 2.

#### Section IV – Permit Shield

- The following changes were made to the table in Section 3 (table for streamlined conditions)

- Indicated that the Reg 1, Section IV.G requirements were streamlined for all three units.
- Added the existing 30-day NO<sub>x</sub> and SO<sub>2</sub> emission limits (from Construction Permits 04PB1439 and 11PB859).
- Added the RH annual SO<sub>2</sub> emission limit.
- Added the RH general CEMS, recordkeeping and reporting requirements.
- Section II, Condition 1.1.1 was added to the column labeled “permit condition(s)” for the Reg 1 PM limits (Reg 1, Section II.A.1.c – 0.1 lb/MMBtu)
- Corrected “Condition 13.5” to read “Condition 13.6” with respect to the requirements in Reg 3, Part F, Section VII.E – related to semi-annual reports for CAM excursions.
- Changed “Condition 1.19.5.3” to “Condition 7.2” with respect to the requirements in Reg 3, Part F, Section VII.E – related to submitting stack test reports within 60 days.

#### Appendix G – Units 1, 2 & 3 PM CAM Plan

- Removed the 0.1 lb/MMBtu PM limit for Units 1 and 2 in Section I.b. In addition, indicated that Condition 1.1.1 includes the RH PM limit, not the Reg 1 limit and removed the reference to Condition 1.19.1.1.
- Removed references to Condition 1.19.3.2 in the table in Section II (under indicator range), since the permit only includes one method to set the baseline opacity for Units 1 and 2.

#### **Other Changes**

#### Page Following Cover Page

- Changed the Responsible Official

#### Section I - General Activities and Summary

- Condition 1.4 was revised to remove Section IV, Condition 3.d as a state-only requirement, since EPA approved these provisions into Colorado’s SIP effective October 6, 2008. In addition, Section II, Condition 1.12 was removed because the Division rescinded the state-only lead requirement.

#### Section II.1 – Units 1 and 2

- Added Construction Permits 04PB1439 and 11PB859 to the citation in Condition 1.9.
- Removed the last paragraph in Condition 20 since the initial compliance demonstration has been completed.

### Section II.2 – Unit 3

- Corrected the reference to the monitoring for the plantwide mercury limits in Condition 2.21 (reference changed from Condition 1.20 to Condition 1.19).

### Section III – Acid Rain Requirements

- Changed the Designate Representative

### Section IV – Permit Shield

- “Headers” were added to the table in Section IV.3 (streamlined conditions) and some requirements were moved to be in the appropriate “header” group.

### Section V – General Conditions

- Revised the version date.
- The paragraph in Condition 3.d indicating that the requirements are state-only has been removed, since EPA approved these provisions into Colorado’s SIP effective October 6, 2008.